WHAT IS CLAIMED IS:

1. A system for aiding the preparation of operation and maintenance plans for a power generation installation in which a plurality of power generation units, a power supply command center and a service center are arranged and connected via communication networks, wherein the service center obtains plant data from the plurality of power generation units via the respective communication networks, for the every plurality of power generation units calculates power generation efficiency for the concerned power generation units in real time by making use of the obtained plant data and design data of the concerned power generation units and prepares operation and maintenance plans for the respective power generation units based on the calculated power generation efficiency.

2. A system for aiding the preparation of operation and maintenance plans for a power generation installation in which a plurality of power generation units, a power supply command center and a service center are arranged and connected via communication networks, wherein the service center obtains plant data from the plurality of power generation units via the respective communication networks, for the every plurality of power generation units estimates process values in a machine and apparatus model by making use of the obtained plant data, determines deviation values between the estimated values and measured values, calculates from the determined deviation value a cost of

economical loss caused by a power generation efficiency reduction of the concerned power generation unit, and prepares operation and maintenance plans for the respective power generation units through comparison between the calculated cost of economical loss and a cost relating to exchange of the machine and apparatus and the parts thereof in the concerned power generation unit.

3. A system for aiding the preparation of operation and maintenance plans for a power generation installation in which a plurality of power generation units, a power supply command center and a service center are arranged and connected via communication networks, wherein the service center obtains plant data from the plurality of power generation units via the respective communication networks, for the every plurality of power generation units calculates remaining life time of the machine and apparatus and the parts thereof in the concerned power generation unit by making use of the obtained plant data and prepares operation and maintenance plans for the respective power generation units by determining exchange time of the machine and apparatus and the parts thereof in the concerned power generation unit based on the calculated remaining life time thereof.

4. A system for aiding the preparation of operation and maintenance plans for a power generation installation in which a plurality of power generation units, a power supply command center and a service center are

arranged and connected via communication networks, wherein the service center obtains plant data from the plurality of power generation units via the respective communication networks, for the every plurality of power generation units calculates remaining life time of the machine and apparatus and the parts thereof in the concerned power generation unit by making use of the obtained plant data, compares the calculated remaining life time with remaining life time of the machine and apparatus in the power generation unit determined in the other power generation unit, modifies the operation condition for the machine and apparatus and the parts thereof so as to enhance economy and prolong or shorten the remaining life time of the machine and apparatus and the parts thereof in the concerned power generation unit, thereby, prepares the operation and maintenance plans for the respective power generation units.